

MEDZHID-ZADE, A.P., starshiy inzh.

Deep-well testing valve. Neftianik 6 no 5:19 My '61.
(MIRA 14:5)
1. TSekh nauchno-issledovatel'skikh proizvodstvennykh rabot
neftepromyslovogo upravleniya Kriovneft'.
(Oil well cementing)

MEDZHIYEVSKAYA, Ye.I.; KAZAKOV, N., red.

{22 centners of peas per hectare} 22 tsertera gorokha s
gektara. Smolensk, Smolenskoe knizhnoe izd-vo, [n.d.]
30 p. (MIRA 17:7)

1. Zaveduyushchaya Pochinkovskim gosudarstvennym sorto-
ispytatel'nym uchastkom Smolenskoy oblasti (for
Medzhiyevskaya).

MEDZIHRADESKY, JOSEPH.

CZECHOSLOVAKIA/Morphology of Man and Animals. Lymphatic and
R.E. Systems.

S-3

Abs Jour: Referat. Zh-Biol., No 1, 10 January 1958, 2874

Author : Medzihradsky, Joseph

Inst : _____

Title : A Study of Hemolymphatic Organs. II. On Circulation in
Hemal Nodes.

Orig Pub: Biologia, 1956, 11, No 2, 87-101.

Abstract: No abstract.

Card : 1/1

-7-

MEDZIHRADSKY, J.

MEDZIHRADSKY, J. Study of hemolymphatic organs. III. Lymphatic
vessels of hemolymphatic nodes in white rats. p.150.

Vol. 11, No. 3, 1956, BIOLOGIA, BRATISLAVA, CZECHOSLOVAKIA.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, No. 10,
Oct. 1956.

MEDZIHRADSKY, J.

Studies on the influence of spleen tissue on the growth of some experimental tumours. I. Experiments with the "Portalization of the splenic vein" in rats inoculated with MR-leukaemia. Neoplasma 9 no.4:381-386 '62.

1. Onkological Research Institute, Bratislava, CSSR.
(LEUKEMIA, EXPERIMENTAL) (PORTAL VEIN)
(SPLENIC VEIN)

MEDZIHRADSKY, J.

Investigations on the influence of spleen tissue on the growth of some experimental tumours. II. The effect of spleen homotransplants on the transplantability of MR-leukaemia. Neoplasma 9 no.4:387-393 '62.

1. Oncological Research Institute, Bratislava, CSSR.
(SPLEEN) (TRANSPLANTATION) (LEUKEMIA, EXPERIMENTAL)

SMIDOVA, V.; VALENTINOVA, N.; SMIDA, J.; MEDZIHRADSKY, J.

Neoplastic transformation of rat embryo fibroblasts by fowl
sarcoma virus B77. Neoplasma (Bratisl.) 12 no.4:453-458 '65.

1. Oncological Research Institute, Bratislava, Czechoslovakia.
Submitted April 28, 1965.

MEDZIHRADSKY-SCHWEIGER, Hadvig (Mrs) (Budapest, VIII., Muzeum Korut 4/b)

Semimicro and microdetermination of carbobenzyloxy group.
Acta chimica Hung 37 no.3:239-245 '63.

1. Institut für Organische Chemie der Lorand Eotvos Universität,
Budapest.

MEDZIHRADESKY, K.

15. Intramolecular alpha-gamma transpeptidation of N-acetylated glutamyl peptides, I. (in German) -- J. Kovacs, K. Medzihradsky, V. Benekner. *Acta Chimica Academiae Scientiarum Hungaricae* -- Vol. 6, 1955, No. 1-2, pp. 183-189, 2 figs.)

It was found that by the action of acetic anhydride carbobenzoxy-L-glutamyl-glycine and carbobenzoxy-alpha-L-glutamyl-glycine were transformed into identical anhydro-compounds which upon partial hydrolysis yielded a mixture of the two compounds. A similar intramolecular transpeptidation occurred in the case of the structurally isomeric two carbobenzoxy-L-glutamyl-L-glutamic acids when upon partial hydrolysis of the bis-anhydro-compound the mixture of the two isomeric glutamic acids was obtained.

②

MEDZIHRADESKY, K.

✓ Intramolecular α,γ -transpeptidation of α -polyglutamic acid. V. Bruckner, J. Kovács, and K. Medzihradszky (Univ. Budapest). *Naturwissenschaften* 42, 30-31 (1955). Heating a soln. of α -polyglutamic acid in HCONH_2 with K_2O in a N atm. a few hrs. at 110° gave an anhydropolyglutamic acid (I), insol. in NaHCO_3 , readily sol. in 0.5N NaOH (room temp.). A polyglutamic acid (II) can be pptd. as the Cu salt from a soln. of I in 0.5N NaOH. II is sol. in H_2O and gives a bluish birefr. reaction. II is a transition type between the α and γ types. The constitution was eld. by degradation in which both α -formylpropionic acid and α,γ -diaminobutyric acid were formed; the γ -glutamyl bonds dominate. It is not certain whether the reaction also gives racemization.
B. J. C. van der Hoeven

(3)

MEDZIHRADESKY, K.

SCIENCE

PERIODICAL: MAGYAR KEMIAI FOLYOIRAT, Vol. 64, no. 7/8, July/Aug. 1958

Medzihradsky, K. Intramolecular transpeptization of structure isomer polyglutamic acids. p. 307.

Monthly list of East European Accessions (EEAI) LC, Vol. 8, No. 2,
February 1959, Unclass.

MEDZHIRADSKIY, K.

GOFMAN, A.; FREY, A.I.; RUTSHMANN, I.; OTT, Kh.; SHEMYAKIN, M.M.; KISHFALUDI, L.; KOCHETKOV, N.K.; DEREVITSKAYA, V.A.; PROKOF'YEV, M.A.; SHABAROVA, Z.A.; FILIPPOVA, L.A.; SHANKMAN, S.; KHAYGA, S.; LIV, F.; ROBERTS, M.Ye.; GAVRILOV, N.I.; AKIMOVA, L.N.; KHLUDOVA, M.S.; MAKSLIMOV, V.I.; IZELIN, B.M.; SHEPPARD, R.K.; SHKODINSKAYA, Ye.N.; VASINA, O.S.; BERLIN, A.Ya.; SOF'INA, Z.P.; LARIONOV, L.F.; KNUNYANTS, I.L.; GOLUBEVA, N.Ye.; KARPAVICHUS, K.I.; KIL'DISHEVA, O.V.; MEDZHIRADSKIY, K.; KAFTAR, M.; LEV, M.; KORENSKI, F.; BUASSONA, R.A.; GUTTMAN, St.; KHOYGENIN, R.L.; ZHAKENO, P.A.; BAZHUS, S.; LENARD, K.; DUAL'SKI, S.; SHREDER, Ye.; SHMIKHEN, R.; KHOKHLOV, A.S.

Results of the Fourth European Symposium on the chemistry of peptides. Abstracts of reports. Zhur. VKHO 7 no.4:468-476 '62. (MIRA 15:8)

1. Aktsionernoye obshchestvo "Sandoz", Bazel', Shveytsariya (for Gofman, Frey, Ott, Rutshmann). 2. Farmatsevticheskaya fabrika "G.Rikhter", Budapesht, Vengriya (for Kishfaludi, Korenski, Dualski). 3. Institut khimii prirodnikh soyedineniy AN SSSR, Moskva (for Kochetkov, Derevitskaya, Shemyakin, Khokhlov). 4. Laboratoriya khimii belka Moskovskogo gosudarstvennogo universiteta (for Prokof'yev, Shabarova, Filippova, Gavrilov, Akimova, Khludova). 5. Fond meditsinskikh issledovaniy, Passadena, Kaliforniya, Sev.Soyed.Shtaty Ameriki (for Shankman, Khayga, Liv, Roberts). 6. Laboratoriya khimii belka Instituta organicheskoy
(Continued on next card)

Gofman, A.,---(Continued) Card 2.

khimii AN SSSR, Moskva (for Maksimov). 7. Aktsionernoye obshchestvo "TSiba", Bazel', Shveytsariya (for Izelin). 8. Liverpul'skiy universitet, Angliya (for Sheppard). 9. Institut eksperimental'noy i klinicheskoy onkolofii AMN SSSR, Moskva (for Shkodinskaya, Vasina, Berlin, Sof'ina, Larionov). 10. Institut elementoorganicheskikh soyedineniy AN SSSR, Moskva (for Knunyants, Golubeva, Karpavichus, Kil'disheva). 11. Institut organicheskoy khimii Budapeshtskogo universiteta, Vengriya (for Madzigradskiy, Kaftar, Lev). 12. Farmatsevticheskiy otdel Aktsionernogo obshchestva "Sandos", Bazel', Shveytsariya (for Buassona, Guttman, Khoygenin, Zhakeno, Rutshmann). 13. Issledovatel'skiy institut farmatsevticheskoy promyshlennosti, Budapesht, Vengriya (for Bazhus, Lenard). 14. Aktsionernoye obshchestvo "Shering", Zapadnyy Berlin (for Shreder, Shmikhenn).
(Peptides--Congresses)

MEDZIHRADSZKY, K.; KAJTAR, M.; LOW, M.

Synthesis of the nonapeptide sequence 1-9 of θ -~~ort~~icotropin.
Coll Cz Chem 27 no.9:2256-2257 S '62.

1. Institute of Organic Chemistry, University of Budapest, Hungary
(for Medzihradzsky).

BAJUSZ, Sándor (Budapest VIII., Rottenbiller u. 26), LPh. Katalin (Budapest VIII., Rottenbiller u. 26), KISFALUDY, Lajos (Budapest XI., Cserkesz u. 57); MEDZINHÁZSÉKY, Éva; BRUCKNER, Viktor, prof., dr. (Budapest VIII., Ruzsák közút 4/a)

Synthesis of a dodecapeptide derivative for the formation of corticotropin active polypeptides. Acta chimica Hung 30 no. 2: 239-243 1962

1. Forschungsinstitut für die Pharmazeutische Industrie; Chemische Fabrik Geleón Richter; und Institut für Organische Chemie der L. Eötvös Universität.
2. Editorial Board member, "Acta Chimica Academiae Scientiarum Hungaricae" (For Bruckner).

KISFALUDY, Lajos (Budapest X., Cserkesz utca 63); DUALSZKY, Sandor (Budapest X., Cserkesz utca 63); MEDZIHRADESKY, Kalman (Budapest VIII., Muzeum korut 4/b); BAJUSZ, Sandor (Budapest VII., Rottenbiller u.26); BRUCKNER, Viktor, prof., dr. (Budapest VIII., Muzeum korut 4/b)

Synthesis of a heptapeptide derivative for the formation of corticotropin of active polypeptides; a preliminary communication. Acta chimica Hung 30 no.4:473-476 '62.

1. Chemische Fabrik Gedeon Richter; Institut fur Organische Chemie der Lorand Eotvos Universitat; Forschungsinstitut fur Pharmazeutische Industrie. 2. Editorial Board Member, "Acta Chimica" (for Bruckner).

L01107-66 EPP(c)/EWP(j) RM

ACCESSION NR: AT5022326

HU/2502/64/041/003/0265/0268

AUTHOR: Madzihradszky-Schweiger, Hedvig (Budapest); Kutassy, Sara (Budapest) 20 6+1

TITLE: Contributions to the microdetermination of phosphorus in phosphorus-containing organic compounds 15

SOURCE: Academia scientiarum hungaricae. Acta chimica, v. 41, no. 3, 1964, 265-268

TOPIC TAGS: phosphorus, organic phosphorus compound, microchemical analysis

Abstract: [German article] The method described for the microdetermination of phosphorus in organophosphorus compounds such as nucleotids and phosphoric acid esters is based on incinerating the sample in the wet state and titrating the resulting material (containing all phosphorus in the form of orthophosphate ions) with a cerium trichloride solution. The combustion was complete and the results correlated well with those obtained by the methods involving sample incineration in an oxygen atmosphere. Orig. art. has 1 figure and 1 table.

ASSOCIATION: Institut fur Organische Chemie der L. Eotvos Universitat, Budapest (Institute of Organic Chemistry, L. Eotvos University) 65

Card 1/2

L 01107-66

ACCESSION NR: AT5022326

SUBMITTED: 14 Jan 64

ENCL: 00

SUB CODE: OC, GC

NO REF SOV: 000

OTHER: 008

JPRS

Card 2/2

L 1187-66

ACCESSION NR: AT5025193

HU/2502/64/042/004/0317/0320

AUTHOR: Madzihradsky-Schweiger, Hedvig (Budapest); Kajtar, Judit (Budapest) 9
B+

TITLE: Micro-determination of the N-carbobenzoyloxy group in aminoacid derivatives by means of hydrogenolysis

SOURCE: Academia scientiarum hungaricae. Acta chimica, v. 42, no. 4, 1964, 317-320

TOPIC TAGS: amino acid, microchemical analysis, chemical reaction

Abstract: [German article] To determine the N-carbobenzoyloxy group in aminoacid derivatives on a micro-analytical scale, the substances were subjected to hydrogenolytic cleavage in a Moslich-type microhydrogenation apparatus and the quantity of hydrogen required to effect the reaction was determined. The analysis is conducted in a dimethylformamide medium. Some results were presented to illustrate the accuracy of the technique and the range of compounds to which it is applicable.

"Thanks are expressed to Professor V. Bruckner for the suggestion of this work and also for his worthwhile advice." Orig. art. has 1 table and 1 figure.

Card 1/2

L 1187-66

ACCESSION NR: AT5025193

ASSOCIATION: Institut für Organische Chemie der L. Eotvos Universität, Budapest
(Institute of Organic Chemistry, L. Eotvos University)

SUBMITTED: 25Jul64

ENCL: 00

SUB CODE: OC, GC

NO REF SOV: 000

OTHER: 004

JPRS

Card 2/2

MEDZINSKIY

E-2

Roland / Analytical Chemistry.
Analysis of Inorganic Substances.

Abs Jour: Ref. Zhur - Khimiya No. 2, 1958, 4292

Author : Kapitanchik, Kuzhawa, Medzinsky

Title : Determination of Aluminum Oxide in Aluminum Metal

Orig Pub: Roczn. Chem., 1956, 30, No. 2, 607-612

Abstract: A method for determining Al_2O_3 present in aluminum metal is developed; it is based on the selective solubility of Al and Al_2O_3 in a solution containing 4g of tartaric acid, 1g of citric acid and 3 ml. of saturated $HgCl_2$ solution per 100 ml. To the resulting solution, 10 ml. of HCl (1:1) is added; the contents are boiled for 5 minutes, filtered, washed with a 5% solution of tartaric acid and the Hg is removed. Filter paper with the precipitate is burned, the ash fused with 3-4g of $K_2S_2O_7$ and

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Poland / Analytical Chemistry.

Analysis of Inorganic Substances.

E-2

Abs Jour: Ref. Zhur - Khimiya No. 2, 1958, 4292

the melt is dissolved in water. To the resulting solution 1 ml. of HCl (1:25) is added followed by 20 ml. of 40% CH_3COOH solution, 5% of Na_2CO_3 and KCN solutions of 4 ml. each, and after 10 minutes 10 ml. of 0.01% solution of hematoxylin and 4 ml. of a 10% solution of CH_3COOH . The resulting solution is made up to 100 cc. and the readings are taken at 540 m μ . with a photometer.

Card 2/2

MEDZIHRADESKY-LEWNEFICHT, Hedvig (Mrs) (Budapest, VIII., Muzeum korut 4/b);
KUTASSY, Sara (Mrs) (Budapest, VIII., Muzeum korut 4/b);

Contributions to micro-phosphorus determination in organic
phosphorus compounds. Acta chimica Hung 41 no.3:265-266 1964.

1. Institut für Organische Chemie der Lorand Eotvos Universität,
Budapest.

MEDZIEVICH, I.M.

MEDZIEVICH, I.M.

Diverticulum of the pericardium in small children. *Pediatrics* 35
no.12:50-53 D '57. (MIRA 11:2)

1. Iz kafedry fakul'tetskoy pediatrii (zav. A.M.Maksudov) Tashent-
skogo meditsinskogo instituta i Detskoy gorodskoy klinicheskoy bol'-
nitay No.8 (glavnyy vrach Ye.M.Pendyurina)
(PERICARDIUM--DISEASES)

MEDZIYEVICH, I.M.

Case of congenital atelectasis. Med.shur.Uzb. no.5:67-68 Ky
'58. (MIRA 13:6)

1. Iz kafedry fakul'tetskoy pediatrii (zav. - dotsent A.M.
Maksudov) Tashkentskogo gosudarstvennogo meditsinskogo insti-
tuta i detskoy klinicheskoy bol'nitsy No.6 (glavnyy vrach -
Ye.M. Pandyurina).

(LUNGS—COLLAPSE)

MEDZIYEVICH, I.M.

Importance of radiography for the early diagnosis of tuberculosis
in the mass over-all examination of children. Med. zhur. Uzb.
no.12:24-26 D '60. (MIRA 14:1)

1. Iz kafedry fakul'tetskoy pediatrii (zav. - dotsent A.M.Maksudov
[deceased] Tashkentskogo gosudarstvennogo meditsinskogo instituta
i iz gorodskoy klinicheskoy detskoy bol'nitsy No.6 (glavnyy vrach -
Ye.M. Pindyurina).

(TUBERCULOSIS—DIAGNOSIS)

(LUNGS—RADIOGRAPHY)

MEDZIYEVICH, I.M.

Importance of X-ray examination of the lungs following influenza in children. Med. zhur. Uzb. no.1:44-46 Ja '62. (MIRA 15:3)

1. Iz kafedry fakul'tetskoy pediatrii (zav. * dotsent A.M. Maksudov [deceased]) Tashkentskogo gosudarstvennogo meditsinskogo instituta i Detskoy ob'yedinennoy klinicheskoy bol'nitsy No.6 (glavnyy vrach - Ye.M. Pindyurina).

(LUNGS--RADIOGRAPHY)

*(INFLUENZA)

MEDZIYEVICH, M.M.

36874. MEDZIYEVICH, M.M., LEGKOVOD, T.I., & DERZHAVETS, B.S.
Rentgenokimograficheskaya kartina serdtsa bol'nykh gipertonicheskoy
bolezni, lechennykh некотorymi fizicheskimi faktorami. Trudy Uzbek. gos. nauch.-iss.
in-ta kurortologii i fizioterapii im. Semashko, sb.11, 1949, c. 167-77

SO: Letopis' Zhurnal Nykh Statey, Vol. 50, Moskva, 1949

MEDZIYEVICH, M.M. [deceased]; DERZHAVETS, B.S.; KETKO, M.I.; GERCHKOVICH, L.S.

X-ray therapy for hypertension. Trudy Uz.gos.nauch.-issl, inst.kur.
fizioter. 13:281-296 '55. (MIRA 18:2)

MEDZMARASHVILI, F. V.

A simplified preparation of samples for determination of sugar in must and wine. F. V. Medzmarashvili. *Vinodelie, i Vinogradarstvo S.S.S.R.* 11, No. 9, 13-14 (1951).
A must (or wine) sample, which after its final diln. to 100 ml. will contain 0.25-1 g. of sugar, is freed from alc. on a water bath and transferred quantitatively into a 100-ml. volumetric flask. After cooling 10-15 ml. of 15% $ZnSO_4$ and 10-15 ml. of 4% $NaOH$ are added, the flask is filled with distd. water to the mark, and the mixt. shaken thoroughly and filtered. An aliquot of the filtrate is then taken for the detn. of sugar by any conventional method. The results are in good agreement with those obtained from the filtrates of the samples previously treated with an active charcoal.
B. Wierbicki

USSR

Preparation of samples for determination of sugar in must and in the grape residues: F. V. Medzmaritskii, Vinodelie i Vinogradarstvo S.S.S.R. 13, No. 8, 214 (1933), cf. *C. A.* 49, 1217a. —The mints, of 15% $ZnSO_4$ and 4% NaOH solution (used for the pptn. of white proteins before decn. of sugar) are not fixed as was stated before but increase proportionally with the sample size. This is true for both the grape must and the grape residues. Thus, for 2.7-ml. must, small samples complete protein pptn. occurred when only 20 ml. of each of the reagents was used. For grape residues greater amt. of the reagents were required on prolonged period of the husks extn.; for periods up to 26 min. the amt. of reagent required was proportional to the extn. time. E. Wierzbicki

MEIDZMARIASHVILI, G. I

Effect of the coefficient of passenger load of buses on
the transportation cost. Avt.transp. 35 no.3:13-15 Mr '57.
(MLRA 10:5)

(Motorbus lines--Cost of operation)

Study
MEDZMARIASHVILI, G. I., Cand Tech Sci -- (diss) " *Investigation*
(of the operation) of the effect of the parameters of city busses *operation* on their
technical *and* economic indices." Mos, 1958. 19 pp with graphs. (Min
M.P.A. Vehicle and Higher Ed USSR, Mos *Automobile* Road Inst), 120 copies. (KL,
9-58, 118)

MEDZMARIASHVILI, G.I., inzh.

Frequency of urban bus service. Trudy MADI no.24:137-144 '58.
(MIRA 11:12)

(Motorbus lines)

USSR/Cultivated Plants - Ornamental.

M.

Abs Jour : Ref Zhur - Biol., No 4, 1958, 15915

Author : I.D. Medzmariashvili

Inst : -

Title : Some Information on the Biology and Agrotechnics of the
Garden Anemone in Abkhaziya.
(Nekotoryye dannyye k biologii i agrotekhnike anemona
sadevogo v Abkhazii).

Orig Pub : Tr. Sukhumsk. botan. sada, 1956, vyp. 9, 495-499.

Abstract : The Anemone coronaria is recommended and described.
The time of the beginning of flowering is pointed out
together with the duration of florescence on the Black
Sea shore of Abkhaziya and the conditions for its cul-
tivation and reproduction.

Card 1/1

MEDZMARIASHVILI, I.D.

On the biology of the garden anemone. Trudy Sukh.bot.sada
no.11:467-471 '58. (MIRA 13:5)
(Anemone)

MEDZMARIASHVILI, I.D.

Materials on the cultivation of garden anemones. Trudy Sukh.bot.sada
no.12:313-336 '59. (MIRA 14:7)

(Anemones)

CZECHOSLOVAKIA
1 Oct 63

MEDZO, Jan

Head, Department of Production, Office of the Commissioner
for Agriculture of the Slovak National Council,
author of an article on fall agricultural works.

Pravda, Bratislava, 1 Oct 63, p 2.

(1)

MEDZVELIYA, D.N.

A case of marble bones. Vest. rent. i rad. no.6:90-92 H-D '55.

(MIRA 9:4)

1. Iz rentgenologicheskogo otdeleniya Respublikanskogo nauchno-issledovatel'skogo instituta tuberkuleza (dir.-dots. A.I. Ushveridze, nauchnyy rukovoditel'-daystvitel'nyy chlen AMN Gruzinskoy SSSR prof. V. Zhgenti) Ministerstva zdavookhraneniya Gruzinskoy SSSR.

(OSTEOSCLEROSIS
osteopetrosis)

MEDZVETSKIY, S.V.; RATNITSKAYA, S.S.

Cholesterol and phosphatides in brain tissue of animals. Biokhimiia
19 no.6:677-682 H-D '54. (MLPA 8:5)

1. Kafedra biologicheskoy khimii Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta.

(BRAIN, metabolism,
cholesterol & phosphatides, determ.)

(PHOSPHOLIPIDS, metabolism,
brain, determ.)

(CHOLESTEROL, metabolism,
brain, determ.)

L 16618-65 EMI(m)/EPR(n)-2/EPR/ENA(d)/EMP(t)/EMP(k)/EMP(b) pf-4/ps-4/pu-4

12P(6)/SSD/ASD(a)-5/ASD(m)-3 MJW/JD/EM/JG

ACCESSION NR: AP4047431

5/0182/64/000/010/0022/0024

AUTHOR: Medzyanovskiy, E. B.

TITLE: Stamping of sheet billets of low-plasticity metals heated by pyrotechnic compounds

SOURCE: Kuznechno-shtampovochnoye proizvodstvo, no. 10, 1964, 22-24

TOPIC TAGS: ²⁷magnesium alloy, ²⁷molybdenum alloy, ²⁷tungsten alloy, blanking, heating, sheet stamping, ¹⁸explosive forming, pyrotechnic

ABSTRACT: Molybdenum, tungsten, titanium, magnesium, and some other alloys have low plasticity at normal temperatures, hampering the production of parts by plastic working. Since heating increases the plasticity of these alloys, the author worked out a new method of heating by application of pyrotechnic compounds to the surface of alloy sheets. The purpose of this work was to estimate the production possibilities of heating by pyrotechnic compounds, to determine the best forming methods with this type of heating, and to measure some characteristics of the process. The pyrotechnic compound consisted of a mixture of two parts (by weight) of a pyrotechnic powder

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L 16618-65

ACCESSION NR: AP4047431

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and one part of a 2% solution of cellulose nitrate in acetone. Only a small quantity of gas and slag were formed during ignition of the pyrotechnic compound and no chemical reaction was noted between the compound and the metal. Tungsten samples 40x50 mm in area and 1.0 or 1.5 mm thick, as well as TsSDM and TsM-2A molybdenum alloys 85--95 mm in diameter and 1.0 mm thick, were heated with or without insulation and the temperature was measured by means of needle thermocouples. Using 5 and 6.5 g of pyrotechnic compound for 35 and 50-g samples of W alloy and 16 and 22 g of compound for 60 and 75-g samples of Mo alloy, suitable stamping temperatures of 400--600C were reached in 10--15 and 20--30 seconds, respectively. The temperature then dropped to 300--400C in a similar time interval. Mg-alloy samples 2.5 mm thick were heated to 250C in 20 seconds. Both W and Mg alloys blanked properly under these conditions, with even edges. Deep drawing of molybdenum-alloy cylinders by a double-action hydraulic press was unsatisfactory, however, as corrugations were formed at the joint between the bottom and the wall. This was caused by insufficient heating. Explosive forming of spherical end closures 140 mm in diameter from TsSDM molybdenum-alloy and MA-1M magnesium-alloy blanks

Card 2/3

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L 16618-65
ACCESSION NR: AP4047431

was very successful. The author concludes that pyrotechnic compounds may be used to produce high-quality parts by explosive forming.
Orig. art. has: 9 figures.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: MM

NO REF SOV: 000

OTHER: 000

ATD PRESS: 3147

Card 3/3

L 44800-65 EWT(m)/EWA(a)/EPR/EWP(t)/EWP(k)/EWP(b)/EWA(o) Pf-4/Pe-4

IJP(c) JD/HW

ACCESSION NR: AP5011055

UR/0182/65/000/004/0025/0028

AUTHOR: Medzyanovskiy, E. B.

TITLE: Effect of the transmitting media on forming of sheet metals by explosive deformation

SOURCE: Kuznechno-shtampovoye proizvodstvo, no. 4, 1965, 25-28

TOPIC TAGS: explosive forming, aluminum alloy explosive forming, transmitting medium, multistage explosive forming, hydrostatic forming

ABSTRACT: AMg6M aluminum-base alloy sheets 2 mm thick were subjected to explosive forming using water, sand, and rubber as transmitting media in a spherical die 120 mm in diameter. To determine the effect of shock waves reflected from container walls, forming was done in a permanent container, a thick-walled cylinder, and in single-shot polyethylene or resin-impregnated glass cloth containers. By varying the weight of the explosive charge, the specimens were deformed until cracks appeared. It was found that forming with sand required an explosive charge 4.5-5.0 times larger than forming with water for a cavity of the same size. The distribution of the maximum deformation and maximum curvature and the nature and location of ruptures along the profile of the deformed blanks were appreciably different in

Cord 1/2

L 44800-65

ACCESSION NR: AP5011055

forming with water, sand, and rubber. The experimental results showed that explosive forming with different transmitting media resulted in different distributions of plastic waves, thus making it possible to control the distribution of deformations in metal. The best method to increase extrusion is to organize the forming process in such a way as to ensure a uniform distribution of the curvature along the blank profile. Thus, maximum deformations can be obtained by multistage successive explosive forming with a change of transmitting media between stages, e.g., water-sand and water-rubber. The multistage explosive forming ensures a greater utilization of the plastic properties of metal than hydrostatic forming. Explosive forming, for example, produced cavities with a volume and depth, respectively, of 1.17--1.32 and 1.27--1.28 times larger than hydrostatic forming; the corresponding figure for relative thinning of the cavity walls was 1.96--2.23 times. Orig. art. has: 4 figures and 2 tables. [MS]

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: MM

NO REF SOV: 005

OTHER: 002

ATD PRESS: 3256

MOB

Card 2/2

L 20449-66 EFP(m)/EWA(d)/EWP(t)/EWP(k) IJP(a) JD/EM/JG/GS
 ACC NR: AT6008820 SOURCE CODE: UR/0000/65/000/000/0171/0179

AUTHOR: Medzvanovskiy, E. B.

ORG: none

TITLE: Explosive forming of low plasticity metals with preheating

SOURCE: Issledovaniye protsessov plasticheskoy deformatsii metallov
 (Research on processes of plastic deformation of metals). Moscow,
 Izd-vo Nauka, 1965, 171-179

TOPIC TAGS: metal sheet, molybdenum alloy, titanium alloy, magnesium
 alloy, alloy sheet, sheet forming, explosive forming / TsSDM alloy

ABSTRACT: The low ductility at room temperature of some molybdenum-,
 titanium-, and magnesium²base alloys presents serious difficulties in
 plastic forming these materials even with methods of explosive forming.
 For these materials a method of explosive forming with preheating has
 been developed in cooperation with the Laboratory of plastic deforma-
 tion at the Institute of Machine Science, Academy of Sciences SSSR.
 Since water cannot be used in this method, sand was selected as the
 most suitable pressure transferring medium. Two methods of preheating
 were tested: heating with hot sand or with an exothermic composition
 which was painted on the blank to be formed and ignited shortly before

Card 1/3

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 B+1

L 20449-66

ACC NR: AT6008820

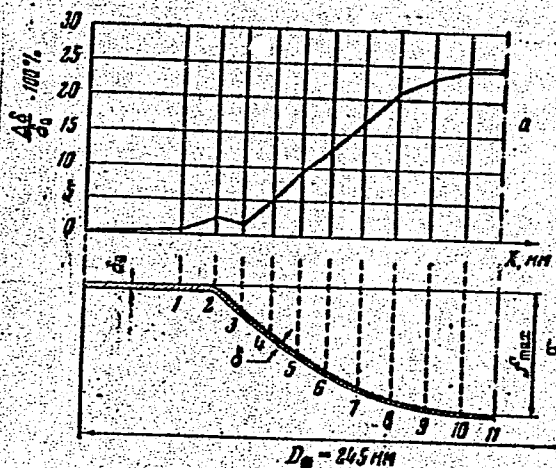


Fig. 1. Distribution of thickness reduction (a) and shape of the part (b) explosively formed from TsSDM alloy sheet 1.012 mm thick (die diameter, 150 mm)

explosion. The second method was found to be more flexible and suitable than the first. The most important variables in the process, such as the amount of the exothermic composition, size of the explosive charge, and distance from the charge to the blank, were determined in preliminary experiments with steel specimens. TsSDM molybdenum alloy Blanks 245 mm in diameter and 1.012 mm thick were painted with 100 g of

Card 2/3

L 204-9-66

ACC NR: AT6008820

exothermic composition and formed into a spherical cup (see Fig. 1). No significant reduction in the blank diameter occurred; the thickness reduction in the center of the blank amounted to roughly 25% without any damage to the material. The temperature of the blank at the moment the explosive charge was detonated was 360—380C. Container heads 37 mm deep with a flange diameter of 140 mm were formed from TsSDM alloy blanks 1 mm thick. In this case, the cavity was due mainly to the reduction in blank diameter; the thickness reduction in the blank center did not exceed 16.8%. The same method was used for a limited number of MA2-1M magnesium-alloy container heads 36 mm deep. The sheet used was 2.5 mm thick. Orig. art. has: 5 figures. [DV]

SUB CODE: 11, 13/ SUBM DATE: 29Oct65/ ORIG REF: 001/ OTH REF: 001
ATD PRESS: 4222

Card 3/3 BK

MEDZYKHOVSKAYA, N. A.

Yakubovich, A. Ya.,; Danilevich, A. A.; and Medzykhovskaya, N. A.

Contact method of production of acetaldehyde from acetylene in the gas phase.

J. Applied Chem. (USSR), Vol. 19, 1946, pp. 973-89

Chem. Abs., Vol. 41, p.4367-f

MEDZYKHOVSKAYA, N. A.

Chemical Abst
Vol. 48 No. 9
May 10, 1954
Organic Chemistry

Chem
Synthesis and polymerization of vinylacrylate M. F.
Shostakovskii, N. A. Medzykhovskaya, and M. G. Zelen-
skaya. Bull. Acad. Sci. U.S.S.R. Div. Chem. Sci. 1952,
627-32 (Engl. translation). See C.A. 47, 10479d.
H. L. H.

SHOSTAKOVSKIY, M.F.; MEDZYKHOVSKAYA, N.A.; ZELENSKAYA, M.G.

Synthesis and polymerization of vinylcaprolactam. Izvest. Akad. Nauk S.S.S.R.,
Otdel. Khim. Nauk '52, 682-9. (MLRA 5:9)
(CA 47 no.20:10479 '53)

MEDZYKHOVSKAYA, N. A.

chem

Chem Abs v48

1-25-54

Organic Chemistry

N-Vinyl-ε-caprolactam. M. F. Shostakovskii, N. A. Medzykhovskaya, and M. G. Zelenakaya. *Akad. Nauk S.S.S.R., Inst. Org. Khim., Sintet. Org. Soedinenii, Sbornik* 2, 44-5 (1952); cf. *C.A.* 38, 3304. — ε-Caprolactam (29 g.) is allowed to react with 9.7 g. K at 60-80° in 150 ml. MePh. The mixt. is charged into an autoclave with 198 g. caprolactam and 200 ml. MePh and the app. is charged with C₂H₄. With agitation the autoclave is heated to about 100° (max. temp. 125°) until reaction ceases, after which a fresh portion of C₂H₄ is admitted. The process is repeated until absorption ceases. Distn. gave 71% *N*-vinyl-ε-caprolactam, m. 34-5°, b. 95°, b₁₀ 131-2°. The K in the prepn. can be replaced by Na. No Cu or Ag parts of the app. must come in contact with C₂H₄. G. M. Kosolapoff

MP
7-19-54

MEDZYKHOVSKAYA, N. A., ZELENSKAYA, M. G.,
SHOSTAKOVSKIY, M. F.

Polymers and Polymerization

Synthesis and polymerization of vinylcaprolactam. Izv. AN SSSR. Otd. khim. nauk. No. 4, 1952.

Monthly List of Russian Accessions, Library of Congress, December 1952. Unclassified.

ISAGULYANTS, V.I.; MEDZYKHOVSKAYA, N.A.; SHISHKOV, V.P.; BABOTINA, V.P.

Synthesis and properties of the vinyl ether of 2-decahydro-2-naphthol.
Doklady Akad. Nauk S.S.S.R. 85, 329-30 '52. (MLRA 5:8)
(CA 47 no.15:7470 '53)

235T14

MEDZYKHOVSKAYA, N. A.

USSR/Chemistry - Plastics

21 Jul 52

"Some Derivatives of the Vinyl Ether of Beta-Decalol, V.I. Isagulyants Act Mem, Acad Sci Armenian SSR, N. A. Medzykhovskaya, V. P. Shishkov

"Dok Ak Nauk BSSR" Vol 85, No 3, pp 567-570

The vinyl ether of beta-decalol reacts with n-butyl alc to give butyl-beta-decalylacetal, which disproportionates on distn and apparently on standing. The vinyl ether of beta-decalol adds bromine. It polymerizes very easily in the presence of acid catalysts (BF_3 , FeCl_3 , AlCl_3) or benzoyl peroxide. The polymers formed are hard, resinous substances. With BF_3 catalyst, the

235T14

reaction goes at neg temps; on heating to 45-70°C the reaction proceeds violently; at high temps, a low mol polymer results. The polymer is non-thermoreactive, hard, clear, colorless to light yellow in color, and sol in a number of org solvents. In connection with Polymerization under use of catalytically acting quantities of benzoyl peroxide, a cryst substance was extracted. According to its mol wt, it is a compd formed from 2 gram mols of the vinyl ether of decalol and one gram mol of oxygen.

235T14

MEERGANS, F.

Organization of work concerning the agricultural machinery in the machine-tractor stations.

p. 493 (MECHANISACE ZEMEDELSTVI) Vol. 7, no. 21, Nov. 1957,
Praha, Czechoslovakia

SO: Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 3,
March 1958

MEERGANZ, F.

A plan for repairing machines in machine-tractor stations.

p. 567 (MECHANISACE ZEMEDELSTVI) Vol. 7, no. 24, Dec. 1957,
Praha, Czechoslovakia

SO: Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 3,
March 1958

MEERGAUS, F.

"Toothed plow edge from the German Democratic Republic." p. 63

MECHANISACE ZEMEDELSTVI. Praha, Czechoslovakia, Vol. 9, No. 3, 1959

Monthly list of East European Accession Index (EEIA), Library of Congress,
Vol. 8, No. 7, July, 1959, Unclassified

NEELSON, F.Z.; KAPELKO, V.I.

The effect of cardiac hyperfunction on its automaticity and reactivity to the chronotropic effect of the vagus. Cor vasa 7 no.4:264-272 1965.

1. The Laboratory of physiology and pathophysiology of the Myocardium, Institute of Normal and Pathological Physiology, Academy of Medical Sciences, Moscow, U.S.S.R.

MEERSON, F.Z.; KALEBINA, N.S.; MALOV, G.A.; SIMONYAN, N.T.; ROMANOVA, I.K.

Effect of actinomycin D on the development of the compensatory hyperfunction of the myocardium, kidney and liver. Acta biol. acad. sci. Hung. 15 no.4:375-382 '65.

1. Laboratory of Physiology and Pathology of the Myocardium (Head: F.Z. Meerson) and Institute of Normal and Pathological Physiology of the Academy of Medical Sciences (Head: V.V. Parin).

BLAKE, R.K.; MEERKAMPER, B.; TUSEK, Ivanka, [translator]

Structure of the developed picture. Kem ind 10 no.7:Suppl.
F-82—F-84 J1 '61.

Mefedova, N. A.

✓ Characteristic bacteria of ocean muds from the northwestern Pacific Ocean. N. A. Mefedova (Oceanolog.

Inst. Acad. Sci. U.S.S.R., Moscow). *Mikrobiologiya* 24, 325-31(1955).—In bottom deposits of the northwestern Pacific are found species of *Flavobacterium* and *Micrococcus*; *Bacillus abyssi*, *B. submarinus*, and *B. borboroides*; *Bacterium amfaris*, *B. rubidum*, and *B. septentrionale*. They are versatile in elaboration of cozymes, and so are able to utilize a wide variety of org. and inorg. nutrients. Their biochem. properties are tabulated. J. P. Smiley

MEFEDOVA - N. A.

Relations of bacteria to chemical processes and animal organisms in sea muds of the Northwest Pacific. L. A. Rozenberg and N. A. Mefedova (Inst. Oceanol., Acad. Sci. U.S.S.R., Moscow). *Mikrobiologiya* 25, 61-5 (1958).
Studies of the complex relations in samples from 12 locations show higher bacterial cell counts in the muds which are richer in microfauna. Mud which is poor in both have a relatively high concn. of biogenic factors. Microflora, microfauna, and biogenic factors all decrease as distance from shore increases. Alky., denitrification activity, and the ratios $N:NH_4$ and $P:PO_4$ were investigated.
Julian F. Smith

KALINENKO, V.O.; MEFEDOVA, N.A.

Bacterial overgrowth on the underwater parts of a ship. Mikrobiologiya
25 no.2:184-190 Mr-Apr '56. (MLRA 9:7)

1. Institut okeanologii Akademii nauk SSSR, Moskva.
(MARINE FLORA) (SHIPS--PAINTING) (BACTERIA)

Mefedova, N. A.

F-1

USSR/Microbiology - General Microbiology

Abs Jour : Ref. Zhur-Biologiya, No 1, 1957, 476

Author : V. O. Kalinenko and N. A. Mefedova.

Inst :
Title : Bacterial Growth on the Submerged Parts
of a Ship.

Orig Pub : Microbiologiya, 1956, 25, 2, 191-194

Abstract : The effect of bacteria on the toxicity of different paints which are applied to the submarine parts of Black Sea ships has been investigated. Sterile sea water did not change the properties of the paints in an experiment which continued for two months. The condition of different paints in natural sea water was studied on experimental glasses covered with

Card 1/3

USSR/Microbiology - General Microbiology

F-1

Abs Jour : Ref. Zhur-Biologiya, No 1, 1957, 476

Abstract : paint in the center. The bacteria utilized the paints as a source of nutrition, formed in the microfissures a multilayer mucous film, and created mineral deposits of Ca, Mg, and Fe. The toxicity of the paints decreased under the influence of the bacterial growths. The bacteria were the first settlers on the submerged parts of ships. Zooorganisms settled on the surfaces, the properties of which were changed by the action of the microorganisms, and established with the latter symbiotic relations. A new method of evaluating the toxicity of paints in laboratory conditions by the use of

Card 2/3

USSR/Microbiology - General Microbiology

F-1

Abs Jour : Ref. Zhur-Biologiya, No 1, 1957, 476

Abstract : bacteria has been proposed. Into a Petri dish with a paint spot in the center, semicooled agar with a suspension consisting of a mixture of sea bacteria cultures was poured. Toxicity was characterized by a zone of luminescence around the paint spot.

Card 3/3

MEFEDOVA, N.A.

ROZENBERG, L.A., MEFEDOVA, N.A.

General study of earths of the northwestern Pacific. L.A.

Rozenberg, N.A. Mefedova. [with Summary in English]

Mikrobiologiya 27 no.2:214-220 Mr-Apr '58

(MIRA 11:5)

1. Institut okeanologii Akademii nauk SSSR, Moskva.
(PACIFIC OCEAN--BACTERIA)

FEDOTENKOV, A.G.; MEFEDOVA, N.A.; DISHKANT, I.P.

Preparation and preservation of bone marrow. Probl. gemat i perel.
krovi 6 no.2:46-49 '61. (MIRA 14:2)

(MARROW—TRANSPLANTATION)

MEFEDOVA, N.A.

Phagocytic activity of bone marrow cells in human fetuses.
Probl. gemat. i perel. krovi no.12:47-50'62. (MIRA 16:8)

1. Iz Tsentral'nogo ordena Lenina instituta gematologii i
perelivaniya krovi (dir.A.Ye. Kiselev) Ministerstva zdravo-
okhraneniya SSSR.

(PHAGOCYTOSIS) (MARROW) (FETUS)

FEDOTENKOV, A.G.; DANILEVA, I.A.; MEFFROYA, N.A.; BISHKAYT, I.I.

Preservation of bone marrow in a plastic container. Probl. gemat.
i perel. krovi 9 no.1:35-40 Ja '64.

(MIRA 18:1)

1. Iz laboratorii konservirovaniya tkaney (zav. - A.G. Fedotenkov)
TSentral'nogo ordena lenina instituta gematologii i perelivaniya
krovi (direktor - dotsent A.Ye. Eiselev).

GEYMBERG, V.G.; MEDED' YEVA, N.P.

Investigation of properties of different variants of *Shigella sonnei*.
Zhur. mikrobiol. epid. i immun. no.11:49-54. N '54. (MLRA 8:1)

1. Iz mikrobiologicheskoy laboratorii (zav. prof. V.N.Azbelev)
Otdela pishchevoy eiciny Institutu pitaniya AMN SSSR (Moskva)
(SHIGELLA,
sonnei, properties of different variations)

MEFERT, V.V.

VASIL'CHENKO, I.T.; MEFERT, V.V. [deceased]; KOTOV, M.I.

Amaranth family (~~Amaranthaceae~~ Juss.). Flora USSR 4:400-414 '52.
(Ukraine—Amaranth) (MLRA 7:12)

MEFFERT, V. V.

BLINOVSKIY, K.V.; BORISOVA, A.G.; VASIL'CHENKO, I.T.; MEFFERT, V.V.;
NIKITIN, V.V.; POYARKOVA, A.I.; SHAPARENKO, K.K.; FEDCHENKO, B.A.;
SHISHKIN, B.K.; ZHDEN, O.A.; VASIL'YEV, A.O., tekhnicheskiy redaktor;
PETROVA, K.T., tekhnicheskiy redaktor

[Flora of Turkmenistan] Flora Turkmenii. Ashkhabad, Izd-vo Turkmen-
skogo filiala Akad.nauk SSSR. Vol.4. 1950. 271 p. (MIRA 10:7)

1. Chlen-korrespondent Akademii nauk SSSR (for Shishkin)
(Turkmenistan--Botany)

L 43945-65 EWA(b)-2/EWA(j)/EWT(1) Pa-4 JK

ACCESSION NR: AP5008021

S/0016/65/000/003/0142/0142

AUTHOR: Mefod'yev, V. V.; Yastrebov, A. F.

27
26
β

TITLE: Role of farm animals in foci formation of Leptospira infection in man

SOURCE: Zhurnal mikrobiologii, epidemiologii i immunobiologii, no. 3, 1965, 142

TOPIC TAGS: animal, cow, pig, man, Leptospira, leptospirosis, animal vector study, epidemiology, serologic test, preventive medicine

ABSTRACT: During 1961-1963 at a large sovkhos in Tyumenskaya oblast 87 cases of leptospirosis were recorded with the highest incidence among children ages 8-15 yrs. All of these children swam in a nearby river which served as a watering place for cattle and was also contaminated by manure from local pig farms. Leptospirosis in the cattle was first noted in 1956 and reached its peak in May 1961. In serologic tests specific antibodies to 11 Leptospira serologic types were found in 60% (70.0%) of the 850 cattle during studies

The prevalent serologic types both in human and cattle serums were

Card 1/2

L 43945-65

ACCESSION NR: AP5008021

Leptospira pomona, L. hebdomadis, and L. icterohaemorrhagiae AB, and the same types prevailed in the pig serums. It was established that farm animals play a direct causative role in the foci formation of

workers. Orig. art. has: None.

ASSOCIATION: Tyumenskiy filial Omskogo instituta prirodnoochagovykh infektsiy (Tyumen Branch of the Omsk Institute of Natural Foci of Infections)

SUBMITTED: 09Sep64

ENCL: 00

SUB CODE: LS

NR REF SOV: 000

OTHER: 000

Card 2/243

MEFODOVSKIY, V.Ya.

Use of a magnesite-chrome lining. TSement 27 no.6:14-15 M-D
'61. (MIRA 15:3)
(Kilns, Rotary) (Refractory materials)

SOZANSKIY, S.G.; MEFODOVSKIY, V.Ya.

Improving suction in cement mills. TSement 28 no.4:19 J1-Ag '62.
(MIRA 15:7)

1. Nikolayevskiy zavod.
(Milling machinery)

(Cement plants)

MEFODOVSKIY, V.Ya.

Saving fuel in clinker buring. TSement 28 no.5:15-16 S-O '62.
(MIRA 15:11)

1. Nikolayevskiy tsementnyy zavod.
(Gas as fuel) (Kilns, Rotary)

SHVYDKIY, M.Ya.; GRINER, M.K.; BEVZ, A.N.; MEFODOVSKIY, V.Ya.

Make fuller use of the capacity of rotary kilns. TSement 28 no.6:
3-5 N-D '62. (MIRA 15:12)

1. Yuzhgiprotsement i Nikolayevskiy tsementnyy zavod.
(Kilns, Rotary)

ABRAMSON, I.G.; BRESLER, B.M.; VASILISHIN, I.P.; KIZNER, A.S.;
MATUSHEVSKIY, T.I.; MEFODOVSKIY, V.Ya.

Gamma-control of moisture in clay slurry. TSement 31 no. 6:
17-19 N.D '65. (MIRA 18:12)

1. Gosudarstvennyy vsesoyuznyy institut po proyektirovaniyu i
nauchno-issledovatel'skim rabotam tsementnoy promyshlennosti i
Nikolayevskiy tsementno-gornyy kombinat.

IVANOV, P.; MEFOD'YEV, P. (g.Alma-Ata); PERFILOV, M. (g.Sverdlovsk);
KIYKO, P., vneshtatnyy instruktor; RZHEVSKIY, Ye.; LIPOVA, K.,
inzh.-tekhnolog (g.Baku)

Letters to the editor. Obshchestv. pit. no. 3:50-51 Mr '61.
(MIRA 14:4)

1. Gorodskoy komitet Kommunisticheskoy partii Sovetskogo Soyuza i
Ministerstvo trgovli RSFSR po obshchestvennomu pitaniyu, g.
Ul'yanovsk (for Kiyko). 2. Starshiy instruktor-kulinar Chelyabinskogo
oblastnogo upravleniya trgovli (for Rzhhevskiy).
(Restaurants, lunchrooms, etc.)

MEFOD'YEV, V.V.; YASTREBOV, A.F.

Role of farm animals in the formation of anthropurgic foci of
leptospirosis. Zhur.mikrobiol., epid. i immun. 42 no.3:142
Mr '65. (MIRA 18:6)

1. Tyumenskiy filial Omskogo instituta prirodnocchagovykh
infektsiy.

MEFOD'YEVA M.P.
GEL'MAN, A.D.; MEFOD'YEVA, M.P.

Preparation of trivalent neptunium. Dokl. AN SSSR 117 no.2:225-226
N '57. (MIRA 11:3)

1. Institut fizicheskoy khimii Akademii nauk SSSR. Predstavleno
akademikom I.I. Chernyayevym.
(Neptunium)

MEFOD'YEVA M. P.

89-3-5/30

AUTHORS: Gel'man, A. D. , Mefod'yeva, M. P.

TITLE: The Reduction of Neptunium to the Trivalent State by a Chemical Method (O vosstanovlenii neptuniya do trekhvalentnogo sostoyaniya khimicheskim metodom)

PERIODICAL: Atomnaya Energiya, 1958, Vol. 4, Nr 3, pp. 271 - 274 (USSR)

ABSTRACT: By means of the spectrographic method it was found that in a 1 to 1,5 M nitric acid and hydrochloric acid solution of rongalite ($\text{NaHSO}_2 \cdot \text{CH}_2\text{O} \cdot 2\text{H}_2\text{O}$), neptunium (IV) is reduced to Np(III). The reduction takes place in nitrogen atmosphere as well as in air. The degree of reduction as well as the stability of Np(III) are, however, remarkably increased in a nitrogen atmosphere. It was found that by an increase of the general content of the reducing agent in the solution (hydrazin + rongalite) the reduction to Np(III) is favored. The reduction of neptunium is on the average accomplished to 70 % in nitric acid solution but to 95 % in hydrochloric acid solution.

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It was further found that in the reduction of Np(V) in ron-

89-3-5/30

The Reduction of Neptunium to the Trivalent State by a Chemical Method

galite a mixture of $\text{Np(III)} + \text{Np(IV)}$ is formed. Np(III) shows a considerable stability against oxidation by atmospheric oxygen in the mixture of Np(IV) with Np(III) . There are 4 figures, and 4 references, 1 of which is Slavic.

SUBMITTED: January 19, 1957

AVAILABLE: Library of Congress

1. Neptunium-Reduction 2. Spectrographic method-Application

Card 2/2

MEFOD'YEVA, M.P.; ARTYUKHIN, P.I.; GEL'MAN, A.D.

Spectrophotometric study of complex formation by the neptunyl
and acetate ions. Radiokhimiya 1 no.3:309-316 '59.
(MIRA 12:10)

(Neptunyl compounds) (Complex compounds)
(Acetates)

5(2, 3)
AUTHORS:

Gel'man, A. D., Mefod'yeva, M. P.

SOV/20-124-4-24/67

TITLE:

On the Complex Formation of Np^{4+} and NpO_2^+ With Trilon B
in Aqueous Solutions (O kompleksoobrazovanii Np^{4+} i NpO_2^+ s
trilonom B v vodnykh rastvorakh)

PERIODICAL:

Doklady Akademii nauk SSSR. 1959, Vol 124, Nr 4,
pp 815-818 (USSR)

ABSTRACT:

In spite of several investigations of the interaction of
actinides with Trilon B (disodium salt of ethylene diamine
tetraacetic acid) there are no data in publications available
on the subject under review. The authors tried to fill the
gap. A. Complex formation of Np^{4+} with trilon B.

Addition of excess trilon B to the Np(IV) -solution at
pH 3.0 shifts the absorption intensity toward the long-wave
range: instead of a maximum 722 $\text{m}\mu$, 740 $\text{m}\mu$ appears and a second
one at 780 $\text{m}\mu$. The maximum 960 $\text{m}\mu$ is shifted up to 983 $\text{m}\mu$.
pH increase up to 6.8 leads to a reduction of the maxima
740 and 780 $\text{m}\mu$ with time, while instead of 983 a maximum

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On the Complex Formation of Np^{4+} and NpO_2^+ With
Trilon B in Aqueous Solutions

SOV/20-124-4-24/67

appears at 988 $\text{m}\mu$. A decrease of the pH values down to 5.2 and below led to a reverse process (Fig 1). On the curves of figure 2 2 horizontal sections (plateaus) can be read: 1) between 0.5 n HCl and pH 2; 2) from pH 3.5 to 6.5 of the solution in which the complex formation was investigated. Apparently, only one single complex compound predominates in each of both ranges. The composition, i. e. the ratio

$[\text{Np}^{4+}]$ in the complex was determined by spectrophotometric titration of Np^{4+} solution with Trilon (at constant acidity and $\mu = 1$). The authors calculated the stability constants for all complexes which could be produced within the system (provided one of them is present at the respective moment). As follows from table 1, a stationary stability constant within the whole range of acidity is attained most favorably for $[\text{NpH}_3\gamma]^{3+}$ and $[\text{NpH}_2\gamma]^{2+}$. It is not possible to determine the presence of 2 different complexes according to experimental data.

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On the Complex Formation of Np^{4+} and NpO_2^+ With
Trilon B in Aqueous Solutions

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The authors suppose, however, that the latter complex predominates. In this connection, they point to a very considerable stability and a similar complex formation of other elements with Trilon. Its $K = (5.7 \pm 3.47) \cdot 10^7$. Complex formation of NpO_2^+ . In the first series of experiments NpO_2^+ was titrated with Trilon solution according to the spectrophotometric method ($\mu = 1$). From the titration curves only the formation of one single complex NpO_2^+ with r^{4-} may be assumed. The stability constants could be calculated only for the complex $[\text{NpO}_2 \text{r}]^{3-}$ ($K = (3.73 \pm 1.79) \cdot 10^9$). In the second series of experiments the dependence of complex formation on pH was investigated on a large excess of Trilon (Fig 3). Apparently, it ends at pH 4.5 since later on no spectral changes were observed up to pH 10. Therefore, it may be assumed that within this range only one complex is produced. For pH 3.2 - 4.5

Card 3/5

On the Complex Formation of Np^{4+} and NpO_2^+ With
Trilon B in Aqueous Solutions

SOV/20-24-4-24/67

the K value for $[\text{NpO}_2]^{3-}$ was calculated which differs from that determined by titration. In the third series of experiments the authors studied the complex formation in dependence of pH for a solution with equimolar Np (V)-and Trilon content. As may be seen from figure 3, already the entire amount of Trilon is bound at pH 6.3. A duplication of the Trilon quantity leads to an increase of $\bar{E}$ (from 225-226 to 235) without considerable variation of the maximum position (by 5 $\text{m}\mu$).

Although the formation of $[(\text{NpO}_2)_2]^{2-}$ could not be proved by the spectrophotometric method, its presence is evidently confirmed by a high degree of stability of the constant calculated for it between pH 3.25 and 4.4 (Table 3). There are 3 figures, 3 tables, and 6 references, 3 of which are Soviet.

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute
of Physical Chemistry of the Academy of Sciences, USSR)

Card 4/5

On the Complex Formation of Np^{4+} and NpO_2^+ With
Trilon B in Aqueous Solutions

SOV/20-124-4-24/67

PRESENTED: July 8, 1958, by V. I. Spitsyn, Academician

SUBMITTED: July 2, 1958

Card 5/5

MEPODYBNA, M. P., Cand Chem Sci — (russ) "Concerning the production of heptanum
in various valence forms and factors effecting their durability in aqueous solutions,"
Moscow, 1960, 14 pp (Institute of Physical Chemistry, AS USSR. Moscow State Univ
in M. B. Lomonosov; Chemical Faculty) (AL, 37-60, 120)

MEFOD'YEVA, M P

PHASE I BOOK EXPLOITATION SOV/5301

Gel'man, Anna Dmitriyevna, Doctor of Chemical Sciences; Apollinariy Ivanovich Moskvina, Candidate of Chemical Sciences; Lev Mikhaylovich Zaytsev, Candidate of Chemical Sciences; and Mayya Pavlovna Mefod'yeva, Candidate of Chemical Sciences

Kompleksnyye soyedineniya transuranovykh elementov (Complex Compounds of Transuranium Elements) Moscow, Izd-vo AN SSSR, 1961. Errata slip inserted. 4,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut fizicheskoy khimii.
Ed. of Publishing House: E.S. Dragunov, Tech. Ed.: P.S. Kashina.

PURPOSE: This book is intended for chemists interested in the complex compounds of transuranium elements, and specifically for young scientific workers and aspirants doing research in this field.

COVERAGE: The book deals with the complex compounds of transuranium elements. It describes the formation of complex compounds of neptunium (including oxalates, carbonates, acetates, and fluorides), and plutonium in aqueous solutions. Types of such solutions are described along with the hydrolysis

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Complex Compounds of Transuranium Elements

SOV/5301

of hydrated plutonium ions of various oxidation states. Physicochemical properties of plutonium compounds in aqueous solutions are examined along with the plutonium oxalates, phosphates of Pu (IV) and Pu (VI), and acetates of Pu (VI). The synthesis and properties of complex compounds of tri-, tetra-, and hexavalent plutonium are described along with the insoluble plutonium compounds such as the plutonium oxalates, hydroxides, peroxides, and dioxides. The formation of americium, curium, berkelium, californium, einsteinium, fermium, and mendelevium complexes are also covered. The use of complex compounds for the separation of transuranium elements is discussed along with prevailing methods such as coprecipitation, extraction, ion exchange, and fractional distillation. The authors thank Candidates of Chemical Sciences P.I. Artyukhin and L. Ye. Drabkin. There are 108 references: 54 English, 46 Soviet, 4 Swedish, 2 German, and 2 French.

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A051/A129

5.2500 (1273, 1350, 1043)

21.3100

AUTHORS: Gel'man, A.D., Mefod'yeva, M.P., Plkayev, A.K., Glazunov, P.Ya.

TITLE: The effect of ionizing radiation on the valency state of neptunium in aqueous solutions

PERIODICAL: Radiokhimiya, v 3, no 1, 1961, 31-36

TEXT: A study was made of fast electrons acting upon $Np^{(VI)}$ in $HClO_4$ (0.02-3.4 n), HNO_3 (0.05 n) and H_2SO_4 (0.86 n) solutions, as well as in 0.8 μ H_2SO_4 . The authors investigated the radiolytic reduction of $Np^{(VI)}$ in these solutions, as well as the radiolytic oxidation of $Np^{(IV)}$ in the sulfuric acid solution. $Np^{(VI)}$ in the $HClO_4$ solution was produced by heating a solution of neptunium salt with concentrated nitric acid for 3-4 hours (Ref 2). $Np^{(IV)}$ in the H_2SO_4 solution was prepared by a two-fold reprecipitation of the hydroxide. The concentrations of neptunium in the investigated solutions was determined by spectrophotometry. Two series of measurements of self-reduction of $Np^{(VI)}$ in the solution were carried out, the concentration of which was close to that of the irradiated solutions. The relation-
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The effect of ionizing radiation ...

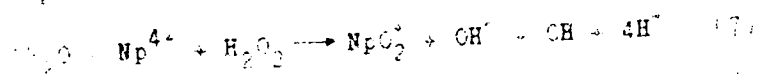
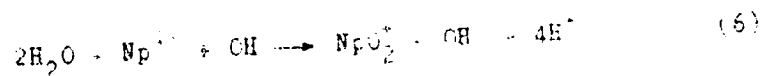
ship curves D_{980} to the standing time of the solutions are given in Fig 1. Fig 2 shows the difference in the accumulation of $Np(VI)$ when the solution is irradiated and Fig 3 is a diagram of the apparatus used for irradiating the solutions. An electron accelerator of 1.0-1.2 Mev served as the source of ionizing radiation (Ref 3). The relationships of the quantity of $Np(V)$ formed to the amount in irradiation of a 0.001 M solution of $Np(VI)$ in 0.86 n H_2SO_4 (curve 1) and 0.001 M $Np(VI)$ in 0.05 n HNO_3 (curve 2) are shown in Fig 4. Using the slopes of the curves 1 and 2 (Fig 4) the initial yields of $Np(V)$ could be computed. $G_{NpO_2^+}$ yield equals 3.01 for 0.86 n H_2SO_4 and 8.25 ion/100 ev for 0.05 n HNO_3 . When an aqueous solution of $Np(IV)$ is irradiated with fast electrons, the oxidation of $Np(IV)$ to $Np(V)$ takes place, but not that of $Np(VI)$. Curve 3 (Fig 4) shows the relationship of the quantity of $Np(V)$ formed to the amount obtained when irradiating a 0.001 M solution of $Np(IV)$ in 0.8 n H_2SO_4 . Thus, the authors conclude that the most stable valency state of neptunium in the radiochemical sense is $Np(V)$, i.e., the neptunoyl ion NpO_2^+ . The authors calculated the value of $G_{NpO_2^+}$ and found it to be largely dependent on the nature of the acid used.

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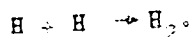
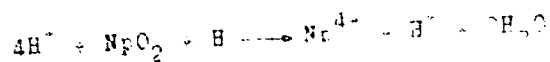
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The effect of ionizing radiation ...

It was found that the oxidation of $\text{Np}^{(IV)}$ to $\text{Np}^{(V)}$ in 0.8 n H_2SO_4 takes place as a result of the presence of OH radicals and hydrogen peroxide:



The experimental values of $G_{\text{NpO}_2^+} = 2.1 \text{ ion}/100 \text{ e}$ indicated that in addition to reactions (6) and (7) other processes may play a part in the radiolytic transformation of $\text{Np}^{(IV)}$, such as:



The authors assume that there is an indirect oxidation of $\text{Np}^{(IV)}$ to $\text{Np}^{(V)}$ by the products of water radiolysis.

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The effect of ionizing radiation on the

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lytic oxidation of Np^{IV} in a sulfuric acid medium becomes more complex due to complex-formation of Np^{IV} with the sulfate ion. There are 4 figures, 1 table and 11 references. Soviet bloc 6 non Soviet bloc.

Table: Relationship of the relative yield of Np^{IV} to the concentration of H_2SO_4

Concentration of H_2SO_4 , M	Relative yield of Np^{IV} , %
0.015	100
0.030	100
0.045	100
0.060	100
0.075	100
0.090	100
0.105	100
0.120	100
0.135	100
0.150	100
0.165	100
0.180	100
0.195	100
0.210	100
0.225	100
0.240	100
0.255	100
0.270	100
0.285	100
0.300	100
0.315	100
0.330	100
0.345	100
0.360	100
0.375	100
0.390	100
0.405	100
0.420	100
0.435	100
0.450	100
0.465	100
0.480	100
0.495	100
0.510	100
0.525	100
0.540	100
0.555	100
0.570	100
0.585	100
0.600	100
0.615	100
0.630	100
0.645	100
0.660	100
0.675	100
0.690	100
0.705	100
0.720	100
0.735	100
0.750	100
0.765	100
0.780	100
0.795	100
0.810	100
0.825	100
0.840	100
0.855	100
0.870	100
0.885	100
0.900	100
0.915	100
0.930	100
0.945	100
0.960	100
0.975	100
0.990	100
1.005	100
1.020	100
1.035	100
1.050	100
1.065	100
1.080	100
1.095	100
1.110	100
1.125	100
1.140	100
1.155	100
1.170	100
1.185	100
1.200	100
1.215	100
1.230	100
1.245	100
1.260	100
1.275	100
1.290	100
1.305	100
1.320	100
1.335	100
1.350	100
1.365	100
1.380	100
1.395	100
1.410	100
1.425	100
1.440	100
1.455	100
1.470	100
1.485	100
1.500	100
1.515	100
1.530	100
1.545	100
1.560	100
1.575	100
1.590	100
1.605	100
1.620	100
1.635	100
1.650	100
1.665	100
1.680	100
1.695	100
1.710	100
1.725	100
1.740	100
1.755	100
1.770	100
1.785	100
1.800	100
1.815	100
1.830	100
1.845	100
1.860	100
1.875	100
1.890	100
1.905	100
1.920	100
1.935	100
1.950	100
1.965	100
1.980	100
1.995	100
2.010	100
2.025	100
2.040	100
2.055	100
2.070	100
2.085	100
2.100	100
2.115	100
2.130	100
2.145	100
2.160	100
2.175	100
2.190	100
2.205	100
2.220	100
2.235	100
2.250	100
2.265	100
2.280	100
2.295	100
2.310	100
2.325	100
2.340	100
2.355	100
2.370	100
2.385	100
2.400	100
2.415	100
2.430	100
2.445	100
2.460	100
2.475	100
2.490	100
2.505	100
2.520	100
2.535	100
2.550	100
2.565	100
2.580	100
2.595	100
2.610	100
2.625	100
2.640	100
2.655	100
2.670	100
2.685	100
2.700	100
2.715	100
2.730	100
2.745	100
2.760	100
2.775	100
2.790	100
2.805	100
2.820	100
2.835	100
2.850	100
2.865	100
2.880	100
2.895	100
2.910	100
2.925	100
2.940	100
2.955	100
2.970	100
2.985	100
3.000	100

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